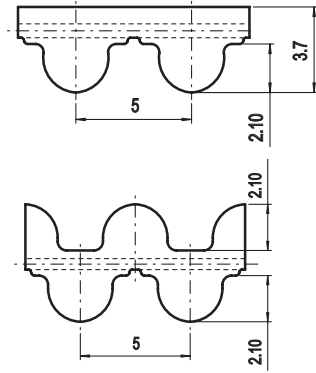


HTD5M



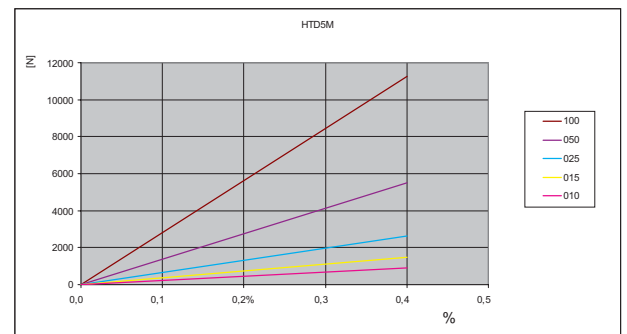
Belt characteristics

- Polyurethane timing belt with round tooth profile and high tensile load tension cords. Produced according to ISO 13050
 - Metric pitch 5 mm
 - The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement.
 - Widely used in linear positioning, light power transmission applications.
 - Double sided tooth construction available
- Width tolerance: $\pm 0,5$ [mm]
 - Length tolerance: $\pm 0,5$ [mm/m]
 - Thickness tolerance: $\pm 0,2$ [mm]

Technical data

Belt width b [mm]	Allowable tensile load Type M F_{Tzul} [N]	Allowable tensile load Type V F_{Tzul} [N]	Breaking load Type M F_{Br} [N]	Specific spring rate C_{spez} [N]	Weight [kg/m]
10	920	460	3360	230000	0,05
15	1500	750	5460	375000	0,07
25	2650	1325	9660	662500	0,12
50	5520	2760	20160	1380000	0,24
100	11270	5635	41160	2817500	0,48

Load / Elongation [%]

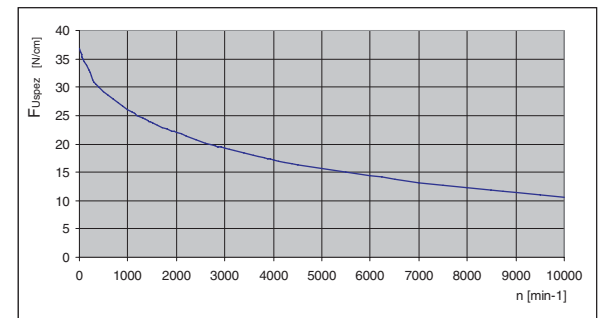


Other widths are available on request.

Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	36,80	800	27,21	1900	22,24	4500	16,40
20	36,25	900	26,61	2000	21,91	5000	15,64
40	35,75	1000	26,05	2200	21,30	5500	14,95
60	35,30	1100	25,52	2400	20,72	6000	14,32
80	34,89	1200	25,03	2600	20,19	6500	13,74
100	34,52	1300	24,56	2800	19,69	7000	13,19
200	33,13	1400	24,13	3000	19,23	7500	12,68
300	30,87	1440	23,96	3200	18,78	8000	12,20
400	30,10	1500	23,71	3400	18,37	8500	11,75
500	29,31	1600	23,32	3600	17,97	9000	11,33
600	28,56	1700	22,94	3800	17,59	9500	10,92
700	27,86	1800	22,58	4000	17,23	10000	10,53

Tooth shear strength / rpm



The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions. This force is related to the drive rpm. The total load F_U transmissible by the belt in the drive is calculated by:



$$F_U \text{ [N]} = F_{Uspez} \cdot Z_e \cdot b$$

F_U [N] = peripheral force
 F_{Uspez} [N/cm] = specific load
 Z_e = number of teeth in mesh in the small pulley
 Z_{emax} = max. no of teeth in mesh to be considered for the calculation of the drive
 Z_{emax} = 12 for ELATECH® M
 Z_{emax} = 6 for ELATECH® V
 b [cm] = belt width in cm

Specialties

PROFILE	Belt width b [mm]	ARAMID CORD		STAINLESS STEEL	
		F _{Tzul} [N] M type	F _{Br} [N]	F _{Tzul} [N] M type	F _{Br} [N]
HTD5M	010	880	3600	600	2400
	015	1430	5850	980	3900
	025	2530	10350	1730	6900
	050	5280	21600	3600	14400
	100	10780	44100		

Flexibility

Minimum pulley number of teeth and minimum idler diameter				
HTD5M		TYPE OF CORD		
		STANDARD	ARAMID	STAINLESS
Drive without reverse bending 	Timing pulley z _{min}	16	16	18
	Idler running on belt teeth d _{min}	50 mm	50 mm	60 mm
Drive with reverse bending 	Timing pulley z _{min}	20	20	20
	Idler running on belt back d _{min}	50 mm	50	60 mm

Timing pulleys

z	da	dw	z	da	dw	z	da	dw	z	da	dw
10	14,77	15,91	39	60,93	62,07	68	107,08	108,22	97	153,24	154,38
11	16,36	17,50	40	62,52	63,66	69	108,67	109,81	98	154,83	155,97
12	17,96	19,10	41	64,11	65,25	70	110,27	111,41	99	156,42	157,56
13	19,55	20,69	42	65,70	66,84	71	111,86	113,00	100	158,01	159,15
14	21,14	22,28	43	67,29	68,43	72	113,45	114,59	101	159,61	160,75
15	22,73	23,87	44	68,88	70,02	73	115,04	116,18	102	161,20	162,34
16	24,32	25,46	45	70,47	71,61	74	116,63	117,77	103	162,81	163,95
17	25,91	27,05	46	72,06	73,20	75	118,22	119,36	104	164,38	165,52
18	27,51	28,65	47	73,65	74,79	76	119,81	120,95	105	165,97	167,11
19	29,09	30,23	48	75,24	76,38	77	121,40	122,54	106	167,56	168,70
20	30,69	31,83	49	76,84	77,98	78	122,99	124,13	107	169,09	170,23
21	32,28	33,42	50	78,44	79,58	79	124,58	125,72	108	170,75	171,89
22	33,87	35,01	51	80,03	81,17	80	126,18	127,32	109	172,34	173,48
23	35,46	36,60	52	81,62	82,76	81	127,77	128,91	110	173,93	175,07
24	37,06	38,20	53	83,21	84,35	82	129,36	130,50	111	175,52	176,66
25	38,64	39,78	54	84,80	85,94	83	130,95	132,09	112	177,11	178,25
26	40,24	41,38	55	86,39	87,53	84	132,54	133,68	113	178,70	179,84
27	41,83	42,97	56	87,98	89,12	85	134,14	135,28	114	180,29	181,43
28	43,42	44,56	57	89,57	90,71	86	135,73	136,87	115	181,88	183,02
29	45,01	46,15	58	91,17	92,31	87	137,32	138,46	116	183,47	184,61
30	46,61	47,75	59	92,76	93,90	88	138,91	140,05	117	185,07	186,21
31	48,19	49,33	60	94,35	95,49	89	140,51	141,65	118	186,66	187,80
32	49,79	50,93	61	95,94	97,08	90	142,10	143,24	119	188,25	189,39
33	51,38	52,52	62	97,53	98,67	91	143,69	144,83	120	189,84	190,98
34	52,97	54,11	63	99,12	100,26	92	145,28	146,42			
35	54,56	55,70	64	100,72	101,86	93	146,87	148,01			
36	56,16	57,30	65	102,31	103,45	94	148,46	149,60			
37	57,75	58,89	66	103,90	105,04	95	150,06	151,20			
38	59,34	60,48	67	105,49	106,63	96	151,64	152,78			

